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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,248	08/14/2006	Alessandro Gilli	3900/DOB/ps	6937
7590 Modiano & Associati Via Meravigli 16 Milano, 20123 ITALY			EXAMINER LUKS, JEREMY AUSTIN	
			ART UNIT 2837	PAPER NUMBER
			MAIL DATE 06/13/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,248

Applicant(s)

GILLI, ALESSANDRO

Examiner

JEREMY LUKS

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 is/are rejected.
- 7) ☒ Claim(s) 11-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/08)
Paper No(s)/Mail Date 8/14/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers (2,934,161) in view of AAPA (Applicant's Admitted Prior Art, Specification, Page 1, Lines 4-14). Powers a muffler (Figure 1, #1) for exhaust systems of vehicles, comprising a tubular shell (3) that is closed at its ends by a front wall (5) provided with an inlet (area near flange #79 is an inlet – Col. 2, Lines 64-67) connectable to receive exhaust gas (via inlet tube #72), and by a rear wall (7), a first chamber (93) and a second chamber (55) being defined within the tubular shell (3), which are separated by a transverse wall (19) having an inlet opening (21) and an outlet opening (23), a perforated inlet pipe (72) extending within the first chamber (93) from the inlet (79) to the inlet opening (21), gas-piping means (29) extending within the first chamber (93) and having one end open to said outlet opening (23), and the other end connectable to exhaust pipes (pancake assembly #49 could be exhaust pipes), wherein said inlet opening (21) and outlet opening (23) are substantially equal in diameter to the inlet pipe (72), and are connected to each other via a toroidal duct (47, 48) that is arranged within the second chamber (55) and is substantially equal in diameter to the inlet pipe (72). Powers fails to teach wherein the tubular shell that is internally lined with a noise-

deadening material. AAPA teaches wherein it is well known to line a muffler shell with noise-deadening material (Specification, Page 1, Lines 4-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Powers, with the apparatus of AAPA to increase the noise-deadening effect of the muffler.

2. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers (2,934,161) in view of AAPA (Applicant's Admitted Prior Art, Specification, Page 1, Lines 4-14) as applied to claim 8 above, and further in view of Gärtner (DE 199 48 146 A1) and Kleukers (6,105,717). Powers and AAPA are relied upon for the reasons and disclosures set forth above. Powers further teaches a toroidal duct (Figure 1, #47, 48). Powers and AAPA fail to teach wherein said toroidal duct has perforated bands of a width in the range $1/8$ to $1/4$, or equal to $1/6$ of the duct perimeter, and extending on the upper surface and on the lower surface of the duct astride the median line of the torus. Gärtner teaches wherein a toroidal duct (Figure 1, U-shaped connecting pipe) when used in combination, has perforated bands (5) extending on the upper surface of the duct astride the median line of the torus. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Powers as modified, with the apparatus of Gärtner to increase silencing by allowing exhaust gases to resonated in the second chamber (of Powers, #55) via the perforated bands (Gärtner, #5) added to the toroidal duct (Powers, #47, 48). Kleukers teaches wherein perforations extend on both the upper and lower side of a toroidal duct (Figures 1a-1b). It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the apparatus of Powers as modified, with the apparatus of Kleukers to further lower backpressure in the muffler by adding both upper and lower perforations to the toroidal duct. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide perforated bands of a width in the range $1/8$ to $1/4$, or equal to $1/6$ of the duct perimeter, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working range involves only routine skill in the art. In re Aller, 105 USPQ 233. Further, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It has also been held that a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Allowable Subject Matter

3. Claims 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record relating to mufflers of exhaust systems for vehicles are disclosed in the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeremy Luks/
Patent Examiner
Art Unit 2837
Class 181

/Lincoln Donovan/

Supervisory Patent Examiner, Art Unit 2837